

CLAIMS

1. A wind generator of the type with automatic power regulation comprising at least two blades of at least one propeller, the efficiency of a propeller varying inversely with respect to the variation of the energy of the wind, starting from a lower limit of the speed of the wind, the torque/speed characteristics of each propeller being determined such that the operating point starts to move towards the zones of low aerodynamic efficiencies when the speed of the wind approaches the value for which the generator reaches the maximum power compatible with safety, the wind generator being characterized in that it also comprises at least one system of centrifugal flyweights arranged in such a way as to reduce the angle setting of at least a part of the blades when the speed of rotation tends to increase, at least one system of stops and means of return or compression which mechanically define the initial angle setting and the optimum operational angle setting up to the nominal speed, a part of the blades being mounted such that it pivots about an axis thus driving by the intermediary of at least one arm or lever or similar device, the end of at least one return spring or of a compression spring, tending to maintain it in contact with at least one fixed stop defining the initial angle setting, the wind generator also being characterized in that in each pair of blades elements of one blade are connected to elements of the other blade.

2. The wind generator as claimed in claim 1 comprising at least two blades, each of them being integral with a bellcrank lever or bellcrank arm or similar means, each lever pivoting about an axis substantially perpendicular to the plane containing said bellcrank lever (or plane of the blades) and on the one hand being fixed to a first flyweight and on the other hand being connected to a first spring, this first spring, functioning in tension, being attached on

the one hand to said first flyweight and on the other hand to the end of another lever itself fixed on the one hand to another flyweight which is different from said first flyweight and on the other hand to another spring which is different from the first spring and also functioning in tension.

3. The wind generator as claimed in claim 2, comprising a pair of two blades, of two levers, of two flyweights and of two springs.

10 4. The wind generator as claimed in claim 3, characterized in that the wind generator comprises two blades 11, each of them being integral with a bellcrank lever 12, the device thus comprising two bellcrank levers 12, each of the bellcrank levers being mounted
15 pivoting about an axis 13, these two axes being perpendicular to the axes of rotation of the blades, each of the ends of the levers 12 being fixed to a flyweight 14, the other end of each lever 12 being attached to a return spring 15, each of the two springs
20 being attached on the one hand to a different flyweight 14 and on the other hand to the end of a lever 12, the two springs facing each other, each one therefore being attached on the one hand to one of the two flyweights which face each other symmetrically with respect to a
25 plane perpendicular to the two bellcrank levers and each one of these two springs being attached on the other hand to the opposite end of the lever to that which connects the spring to the flyweight, this end, called the opposite end, in fact being the end of the
30 lever connected to the other flyweight, each spring thus connecting the flyweight attached to one lever to the end of the other lever attached to the other flyweight, the wind generator furthermore comprising a stop 20 corresponding to each lever, that is to say two
35 stops 20, which determine the initial angle setting alpha of each blade, F' being the indication of the direction of the wind W and the other arrows F and f indicating the movements of the flyweights and of the blades respectively.

5. The wind generator as claimed in claim 1 comprising a set of at least two blades 21, each integral with a bellcrank lever 22, each bellcrank lever being connected to a flyweight such as 24, each
5 of these bellcrank levers pivoting about an axis 23, the wind generator furthermore comprising at least one spring functioning in compression, this spring being connected on the one hand at its base to at least two stops disposed at one of the ends of each of the levers
10 and on the other hand at its top to a fixed nut 26.

6. The wind generator as claimed in claim 5, comprising two blades 21, two bellcrank levers 22, two flyweights 24, each bellcrank lever being connected to one of the two flyweights 24, each of these bellcrank
15 levers pivoting about an axis 23, the device comprising at least one spring 25 functioning "in compression", this spring being connected at its base to at least two stops 30 and this spring being connected at its top to a fixed nut 26, the two flyweights separating in the
20 direction of the arrow F, with movement of the blades in the direction of the arrows f, f' being the direction of compression and F' being the direction of the wind W.

7. The wind generator as claimed in one of claims
25 1 to 6, comprising a set of at least two blades 21, each one integral with a bellcrank lever 22, each bellcrank lever being connected to a flyweight such as 24, each of these bellcrank levers pivoting about an axis 23, the wind generator being characterized on the
30 one hand in that it comprises at least one spring functioning in compression, this spring being connected on the one hand at its base to at least two stops disposed at one of the ends of each of the levers 22 and on the other hand at its top to a fixed nut 26, the
35 wind generator being characterized on the other hand in that it comprises at least two other springs 15, called return springs, functioning in tension and each one being attached on the one hand to a flyweight and on the other hand to an end of a bellcrank lever with an

arrangement such that each of the ends of the levers 22 is fixed to a flyweight 24, the other end of each lever 22 being attached to one of said return springs 15, each of the two springs being attached on the one hand to a different flyweight 24 and on the other hand to the end of a lever 22, the two springs facing each other, each one therefore being attached on the one hand to one of the two flyweights which face each other symmetrically with respect to a plane perpendicular to the two bellcrank levers and each one of these two springs being attached on the other hand to the opposite end of the lever to that which connects the spring to the flyweight, this end, called the opposite end, in fact being the end of the lever connected to the other flyweight, each spring thus connecting the flyweight attached to one lever to the end of the other lever attached to the other flyweight, the wind generator furthermore comprising at least one stop 30 corresponding to each lever, which determine the initial angle setting α of each blade, the arrow F' being the indication of the direction of the wind W and the other arrows F and f indicating the movements of the flyweights and of the blades respectively.

8. The wind generator as claimed in claim 7, comprising two blades 21, two bellcrank levers 22, two flyweights 24, two axes 23 and two stops 30, each bellcrank lever 22 being connected to one of the two flyweights 24, each of these bellcrank levers pivoting about one of said axes 23, the wind generator comprising at least one spring 25 functioning "in compression", this spring being connected at its base to at least the two stops 30 and this spring being connected at its top to a fixed nut 26, the two flyweights separating in the direction of the arrow F , with movement of the blades in the direction of the arrows f , the wind generator also comprising two return springs 15, each of them being fixed on the one hand to the end of one of the two levers 23 and on the other hand to a flyweight 24 attached to the other lever.